

Convention on Biological Diversity and access to genetic resources: International regime and our experiences

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Traditional Knowledge, community rights and access to benefit sharing of biological resources are emerging Issues after Convention on Biological Diversity (CBD) entered into force. This paper highlights legal system of access to benefit sharing in CBD and our efforts made so far to protect traditional knowledge by the legal documentation of biological resources and traditional knowledge associated with it. The paper advocates bioprospecting as a forward looking opportunity to convert natural resources into biological capital and highlights role and responsibility of local people to make equitable sharing of the benefits from the resource they conserve and knowledge they hold.

Key words: Access and benefit Sharing, Traditional Knowledge, Bio-prospecting.

Convention on Biological Diversity (CBD), is the first international attempt to provide a legal framework for ensuring conservation and sustainable use of the genetic resources in addition to addressing concerns of equity. This international convention promotes services to the communities involved in creation and conservation of biological resources, in the form of adequate reward and compensation and as an incentive to continue conservation. Interest in access to genetic resources as an international issue grew in the early 1980s and got focused in the negotiations leading to the CBD. The livelihoods of millions of the rural people around the world depend on the biological resources and the associated traditional knowledge that has evolved over centuries of how best to manage and use those resources and the genetic material they contain. (Bala *et al*, 2004).

The CBD provides a minimum framework for regulating access to genetic resources and benefit sharing. Following are the important provisions on regarding access and benefit sharing :

- Equitable share with local communities of the benefits from use of their traditional knowledge. (Article 8j)
- The States have the Sovereign right to regulate access (Article 15.1)
- Only the country of origin of a country that has acquired genetic resources in compliance with the CBS may grant access to genetic resources (Article 15.3)
- Access must be on mutually agreed terms; (Article 15.4)

- Access is subject to the prior informed consent of the Party that is providing the resources. (Article 15.5)
- Research to be carried out with full participation of the country providing the genetic resources (Article 15.6)

The CBD recognizes role of individual parties to decide what their regulatory frameworks will be to cover above mentioned provision. (*I.e. Sui generis system*)

Principles applied in access to genetic resources and benefit sharing

Sovereignty of respective State - It is the power of a state to independently regulate its own internal and external affairs. Sovereignty is not ownership; it is the power to regulate ownership. Ownership of biological resources may be established in countries constitution or in one or more laws governing natural resources.

Other obligations

Precaution- Lack of scientific certainty should not be used as an excuse to postpone action to avoid potentially significant or irreversible damage to biological diversity and its components;

Prevention- Policies and measures related to the conservation and sustainable use of biological resources should be based on anticipating and preventing damage to biological diversity and its components, rather than on attempting to remedy or compensate for damage;

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Equity- all individuals and groups, particularly those such as women and traditional communities that in many countries have been historically marginalized, should have equal opportunity to participate in deciding how biological resources are conserved and used;

Cooperation- Cooperation should extend not only to other states, but to the non governmental/private sector nationally, regionally and internationally. (Bala *et al*, 2004).

Accessibility of genetic resources in Nepal (Pre-CBD Scenario)

Prior to the CBD in 1992, genetic resources were considered as common property, and the exchange and exploration of genetic resources was taking place freely. Most international organizations from developed countries working on crop genetic resources were allowed to explore, collect and research on resources available in any countries of the world. As a result, Consultative Group on International Agriculture Research (CGIAR) developed considerable number of high yielding varieties of crops and sturdy breeds of animals in turn, increasing food production considerably. Most of the known germplasms of plants and animals have already been collected and stored at different international centers. It has been reported that more than 13,000 germplasms of various crops had been taken by different agencies from Nepal and deposited in various international and national gene banks.

Convention on Biological Diversity and our commitments

Nepal being a Party to CBD is committed to the conservation of biological resources, sustainable use of natural resources and institutionalization of equitable sharing of benefits arising out of the

biological resources and the traditional knowledge associated with biological resources. Community based traditional knowledge of biological resources are plenty in a country like Nepal which stands 25th in terms of global biodiversity ranking. This knowledge, however, has not been recognized and the rights over the benefits have not been adequately guaranteed. Protection of traditional/indigenous knowledge of these communities is necessary to exercise provisions and obligations of Article 15 and Article 8j of the CBD. His Majesty's government of Nepal (HMG/N) has implemented the Nepal Biodiversity strategy in 2002(NBS,2002) which provides a strategic planning framework for the conservation of biodiversity and equitable sharing of benefits out of the use of the genetic or biological resources. This document is an overall policy instrument for sustainable use and conservation of biodiversity that places emphasis on the ecosystem, species that are indigenous and endemic. Nepal Biodiversity Strategy (NBS) has outlined major threat to Nepal's biodiversity as ecosystem loss, species loss, and loss of agro-biodiversity and genetic resources. It identifies root cause of these threats and sectoral and cross-sectoral strategies of nation to address it. NBS focuses on the meaningful participation of local communities in development activities and advocates for landscape planning approach of conservation. The NBS envisions need for registration of the indigenous knowledge, local innovations and skills. This document gives due consideration to the protection and promotion of Traditional Knowledge (TK), practices on skills of the local communities for biodiversity conservation and utilization in a sustainable manner.

Similarly Nepal Biodiversity Strategy and Implementation Plan (NBSIP) is under process of preparation to translate the vision of NBS into actionable framework within the spirit of CBD. This plan has considered the successful mechanisms of

Number of Plant Germ Plasms collected from Nepal by countries/Agency and Type of Crops

SN	Country/Agency	Types of Germplasm	No. of Germplasms collected
1	Japan	All crops(not specified)	8941
2	USA	All crops(not specified)	1809
3	IRRI, Philippines	Rice	1712
4	Taiwan	Vegetables	498
5	CYMMYT, Mexico	Wheat	175
6	UK	Barley	160
7	India	Not specified	101
8	Germany	Wheat and Barley	NA
Total			13,396

Source: Upadhayay 2002.

conservation and development already in place, and on the other hand, it has projected planned actions for the development of new policies and initiatives to address the existing constraints and gaps. Draft implementation plan has identified 12 priority areas such as forests, range lands, agro biodiversity, wetlands and mountain biodiversity.

The Ministry of Forests and Soil Conservation (HMG/MFSC) drafted a Bill on “Access to Genetic Resources and Benefit Sharing” as required by the Article 15(7) of the CBD. This Draft Bill aims to conserve and sustainable utilize biological and genetic resources, facilitate access to those resources, ensure equitable sharing of benefits and protect traditional knowledge associated with the resources and the knowledge holding communities’ rights. The bill proposes documentation and registration of biological resources and associated traditional knowledge as a *Sui generis* system for the protection of traditional knowledge and the relevant knowledge holders.

Traditional Knowledge and Access to benefit sharing

Traditional knowledge (TK), used synonymously with Indigenous knowledge (IK) is the knowledge, skills and practices possessed by a group of people or community developed around specific physical, ecological and cultural conditions in a practical geographical area transferred from one generation to the next over a period of time. TK is the collective knowledge possessed by the community and is embedded in their practices, institutions, relationships and rituals. The CBD defines TK as “the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, TK is transmitted orally from generation to generation.

This Knowledge tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language and agricultural practices including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields agriculture, fisheries, health, horticulture and forestry. (CBD,1992)

Documentation of biodiversity and associated TK is necessary to protect it from being lost and to protect the rights of communities over the knowledge they possess. Documentation is also necessary to facilitate access and benefit sharing mechanism among the nation, the users of biological resources and associated TK and the documentation should, therefore be to preserve and promote TK for the benefit of present and future generations of the knowledge holding communities and of the wider Public and to prevent misappropriation of biological resources and associated TK. The documentation should focus on assisting communities to recognize and appreciate the significance of their TK system as a viable strategy for the sustainable conservation and ensure further development of traditional innovations and practices.(Shrestha et al,2004).

Assessment of intellectual property of the TK holders is central while initiating documentation exercise that would also lead to protect communities’ rights. Access to Genetic Resource and Benefit Sharing (AGRBS)/Bill is only regulatory document developed in the country so far that deals with biodiversity related TK. This bill proposes preparation of community level biodiversity registers, which have to be registered with the proposed National Genetic Resource Conservation Authority. Prior Informed Consent (PIC) has been made mandatory before collecting TK related information from the communities. This is especially important if the documentation is carried out by institutions or parties other than the communities themselves to secure bio-resources and knowledge from piracy.

In the existing scenario, where globalization and scientific development has taken precedence, TK and the knowledge holding communities are facing threats and risks of extinction. Besides, the TK is disappearing rapidly due to various reasons such as urbanization, mass migration from rural to urban areas, market forces, and adoption of modern technologies replacing traditional practices, destruction of forest and natural habitats and so on. On the other hand, misappropriation of biological resources and associated TK is also taking place due to the failure to recognize and exercise rights of local and indigenous communities over the resources and their TK. There are several cases where occupational caste and professional creeds are failing to sustain their tradition. It is, for the reason, necessary to find ways for the protection of TK. (Shrestha *et al.*, 2004).

Efforts of MFSC to initiate a pilot phase biodiversity and TK documentation and registration programme were cornerstone to internalize documentation exercise in Nepal. This documentation covered representative ecological regions of Nepal in Kaski and Mustang district (Paudel K.C, 2002). Based on the learning consolidated from the pilot phase project, his Majesty Government of Nepal has approved the format for documentation of biological diversity in April 2003.

A number of institutions like Nepal Agricultural Research Council (NARC), International Union of Conservation of Nature (IUCN), HIMWANTI and several other NGOs are now involved in documentation of biological resources and associated TK in Nepal. Following up the initiation of Ministry of Forests and Soil Conservation (MOFSC), a joint project of MOFSC in collaboration with IUCN named "Building Capacity to Protect Biodiversity and Indigenous Rights through Documentation and Registration of Traditional Knowledge in Nepal" is in process of handing over more than 25 Community Biodiversity Registers (CBR) to different local communities of Nepal. Initiation in the direction of Biodiversity documentation has raised awareness, and made recognition of Traditional Knowledge holders in Nepal.

Article 8j of the CBD obliges each member state to take necessary policy, legislative and administrative measures to protect the biological resources and their diversity, associated indigenous knowledge, skills, technologies and values. At the same time the property rights and any benefits arising from the commercial and other use of genetic resources belonging to local communities, breeder and CBD member states are ensured through the legal registration of knowledge through an effective *Sui generis* system.(Paudel, 2003).

Some forthcoming opportunities and issues

The term "biodiversity prospecting" also known as 'bio prospecting' is defined as ' the exploration of biodiversity for commercially valuable genetic resources and biochemical. (NBS, 2002). Thus bio-prospecting equates to the search for morphological, physiological, genetic or biochemical characteristics of plants, animals, fungi, microorganisms, and viruses, and their products, which may have commercial application.

Today approximately 80 percent of the world's population relies on traditional plant based medicines for primary health care. The remaining 20 percent of the world's population also depends on plant products for health care. These statistics reflect us clear learning that biological resources and associated traditional knowledge will be an important part of pharmaceuticals and other development project in the future. As CBD affirms the rights of genetically rich source countries over their biological resources, it provides ample opportunity for country like Nepal to get equitable collaboration and compensation from the benefit generated by medicinal and other discovery and development of industrialized world. Thus Bioprospecting despite its criticism as one of the ways of commercial exploitation of bioresource has emerged as a well contested agenda in the field of access and benefit sharing.

Despite ample of opportunities our biological resources bring, we have still suffered from institutional to implementation drawbacks in operationalizing our plans into actions. Nepal Biodiversity Strategy (NBS) envisioned Nepal Biodiversity Trust Fund (NBTF) as an autonomous legal entity by an Act of parliament. NBSIP further elaborates the responsibility of NBTF to provide financial and technical support to government agencies, non-government agencies, and other institutions involved in the conservation of biodiversity in Nepal and enable them to undertake appropriate activities, programs or projects inside and outside the protected areas with priority to the nationally and globally significant projects that are currently under-funded. (Draft NBSIP, 2005). However, very less initiative have been taken to establish such trust fund.

The Draft Bill on Access has been on continuous discussion from more than three years and has been gone through criticism by the groups of indigenous communities now. Postponement in enforcing this bill will delay in recognizing the TK rights of indigenous people, especially to refute and invalidate any claims of intellectual property right over their Traditional Knowledge, practice and innovation and that will ultimately leave the door open for biopiracy.

Conclusion

The developing countries like Nepal are rich in biological diversity however developed countries are

rich with mechanized technology. CBD is the first international legal instrument that brought out a radical change forming prevailing common perception on genetic resources as “common heritage of mankind” to a legally binding regime that confers “sovereign rights” to the states over their own biological resources. Thus time has now come when our documentation system must be strong to make claim for equitable sharing of the benefits achieved by the traditional knowledge of local and indigenous communities. For this, commercial collaborators should recognize the potential of knowledge and must pay for it. Indigenous communities who participate in the ethno botanical collection of the sample should only take part in these, after getting clear information about the information collectors and the project. Similarly, local communities must be benefited by the remuneration and use of the indigenous knowledge, either such knowledge contributes any commercial product or it contributes to any research. Very important among all these is that prior informed consent system must be institutionalized in national law to ensure the right of communities over biological materials and their knowledge to conserve it.

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